State of Wisconsin/Department of Transportation
RESEARCH PROGRESS REPORT FOR THE QUARTER ENDING: December 31, 2007

Program: SPR-0010(36) FFY99	**Part: II Research and Development**	
Project Title: PRE-OVERLAY REPAIR OF EXISTING CONCRETE & ASPHALT PAVEMENTS	**Project ID: 0092-08-09**	
Administrative Contact: Andrew Hanz	**Sponsor:**	WHRP
WisDOT Technical Contact: Irene Battaglia	**Approved Starting Date:**	10/1/07
Approved by COR/Steering Committee: $69,896	**Original End Date:**	5/31/09
Project Investigator (agency & contact): Haifang Wen – University of Wisconsin-Madison	**Current End Date:**	5/31/09
	Number of Extensions:	0

Percent Complete: 15%

Request a No Cost Time Extension (Please Select One): ☐ **YES** ☒ **NO**

Reason for No Cost Time Extension: None

Project Description:

A large percentage of the asphaltic paving projects performed in Wisconsin are asphaltic overlays of existing asphaltic or concrete pavements. The conditions and distresses in these pavements vary considerably when they are chosen for overlay, and the amount and methods of pre-overlay repairs also vary widely. This lack of consistency in the pre-overlay repair leads to large variations in the performance of these asphaltic overlays. In 2004, WHRP sponsored a study, 0092-04-05, titled "Guidelines for the Surface Preparation/Rehabilitation of Existing Concrete and Asphaltic Pavements Prior to an Asphaltic Concrete Overlay." The performance of overlay using different pre-overlay repair methods was evaluated in that study. Other factors affecting the overlay performance were also investigated. Due to the budget and time limitation of the previous study, the findings from previous study needs to be validated using more performance data. In addition, the cost-effectiveness of the pre-overlay repair methods needs to be determined through the life cycle cost analysis before the recommendation on the amount and methods of pre-overlay repair is made.

Progress This Quarter:

A kick-off meeting was held on Nov. 2, 2007 with Ms. Irene Battaglia, the project manager. Hani Titi attended via teleconference. A schedule was presented by Haifang Wen task by task.

The WisDOT ride reports were provided by Ms. Irene Battaglia to the team for overlay projects searching. The time of overlay construction ranged from 1993 to 2005. The overlay projects were retrieved from the ride report database. About 400 asphalt overlay projects were identified. With the help of Ms. Irene Battaglia, a graduate student was assigned to download the as-built plans

from Truax Center server. These as-built plans will be reviewed for data retrieval. Additional literature review was also conducted in this quarter.

Work Next Quarter:

In next quarter, the team will start reviewing the as-built plans and start building an overlay project database for this study. The team will use PIF database to obtain the overlay performance. The team will also try to get the updated field quantities for the candidate projects. The database will consist of the overlay performance (PDI and IRI), overlay age, overlay thickness, materials, traffic, repair quantities and methods, for future statistical analysis.

In next quarter, the team will also start coordinating for the field work during the construction season, such as FWD tests. The University of Wisconsin – Milwaukee will be in charge of this task.

Circumstances Affecting Progress/Budget:

None.

Gantt Chart:

Tasks	**07**	**2008**				**2009**				**10**
		Phase I						**Phase II**		
	Q 4	Q 1	Q 2	Q 3	Q 4	Q 1	Q 2	Q 3	Q 4	Q 1
Task 1: Literature Review										
Task 2: Data Collection										
Task 3: Interim Report for Phase I										
Task 4(a): Determine Overlay Lives										
Task 4(b): Perform Life Cycle Analysis										
Task 5: Validation of Previous Findings										
Task 6: Prepare a Guideline for Pre-overlay Repair										